



Aqua Satellite and MODIS Swath

Description



Satellites are important to scientists because the instruments on board can provide almost daily global coverage of the Earth that would otherwise not be available. There are six instruments on board NASA's Aqua satellite. One of them is MODIS, the Moderate Resolution Imaging Spectroradiometer. MODIS measures 36 spectral frequencies of light, which provide a wealth of information about the physical properties of the atmosphere and the biological and physical properties of the oceans and land. The Aqua satellite with MODIS attached was launched May 4, 2002. Since then, Aqua has been circling the Earth at an altitude of 438 miles (705 kilometers) every 99 minutes in a polar orbit passing within 10 degrees of each pole every orbit. The orbit is sun-synchronous, which means that the satellite passes over the same spot of the Earth at about the same local time everyday. Aqua crosses the equator from south to north at about 1:30 pm local time.

This dataset shows the path of the Aqua satellite and MODIS swath over a period of one day, August 27, 2005. The swath of data collected by MODIS

is over 1400 miles (2300km) wide. This means that MODIS is able to measure almost the entire Earth surface everyday. MODIS only collects data when it is on the sunlit side of the Earth because it measures reflected light from the Sun. The bright band that appears in the middle of some of the swaths is reflected sunlight off of the ocean. By August 27, 2005 Hurricane Katrina had crossed Florida and was strengthening in the Gulf of Mexico. That hurricane, as well as Typhoon Talim in the western Pacific between Japan and New Guinea, is visible in this dataset.

Notable Features

- Each orbit takes 99 minutes
- Data is only collected on the sunlit side of the Earth
- Hurricane Katrina and Typhoon Talim are visible

Related Datasets

(None)

Details

Category **Atmosphere**

Audio **No**

Dataset Source NASA MODIS

Dataset Developer
NASA Goddard Space Flight
Center

Visualization Developer
NASA Goddard Space Flight
Center

Contact
NASA Goddard Space Flight
Center

Directory FTP Link

Keywords Atmosphere, NASA, satellites, MODIS, Aqua





Blue Marble (23 degree tilt)

Description



images throughout 2001. Most of the information came from NASA's MODIS, the Moderate Resolution Imaging Spectroradiometer, which is attached to the Terra satellite 435 miles above Earth. The background image of the land and oceans was created using data from June through September of 2001. This could not be done in a single day or even a week because on any given day clouds are blocking a significant portion of the surface. The cloud image is a composite of three days worth of data. The first two days of data were collected in the visible wavelength and the third day was needed to get a view of the clouds over the poles using thermal infrared imagery.

The Blue Marble is an incredibly detailed, true-color depiction of the Earth.

NASA is responsible for this dataset made from a compilation of satellite

The shading is true color with the oceans shades of blue, the clouds white and the lands varying from green to brown. The brown areas are the sands of the deserts. The shading of the land was done using a dataset compiled by the U.S. Geological Survey's Earth Resources Observation

and Science Data Center.

Additional Blue Marble datasets are available to highlight some of the characteristics of the changing Earth. The standard Blue Marble is a year long composite to show an average view of the earth. The Blue Marble without clouds is also available in monthly composites the entire year. This monthly evolution is the seasonal blue marble. The monthly evolution allows audiences to see the changing appearance of the Earth due to the season changes. The most dramatic change is the expansion of the snow cover during the winter months and then the depletion of it during the summer months. Blue Marble: Next Generation provides an updated version of the seasonal changes dataset. The Blue Marble is also available without the cloud cover so that the vegetation can be clearly seen. This dataset has also been merged with the Nighttime Lights dataset, to create a new dataset. The new dataset shows the Earth with daytime and nighttime views of the Earth, to demonstrate how only half of the Earth is illumintated at one time.

Details

Category Land

Audio Yes

Dataset Source NASA Goddard Space Flight Center

Dataset Developer
NASA Goddard Space Flight
Center

Visualization Developer NASA

Contact
Beth Russell

Directory FTP Link

Keywords Land, Solar System, Earth, Blue Marble

Notable Features

- Vastness of the Sahara Desert
- Shading done in true color: gives Earth's appearance from space

Related Datasets











Earth's Moon

Description



One theory on the creation of the moon is that a Mars-sized body crashed into the Earth and the material that broke in the collision formed the moon. The oldest material collected from the moon dates back to 4.5 billion years ago. This is believed to be the age of the moon. The moon rotates in such a way that the same side always faces the Earth. The side viewed from Earth is referred to as the near side, while the other side is the far side. Exploration of the moon has revealed that the near side of the moon is different than the far side of the moon. Temperature ranges from -387°F to 253°F on the moon depending on the side of the moon the temperature is taken from and whether it is night or day.

The near side of the moon has light spots referred to as Lunar Highlands and dark spots called Maria. The maria are lower in altitude than the highlands and filled with dark solidified lava from when the moon was volcanically active. Both areas are littered with craters, as the Moon's surface is very old and has had time to accumulate craters. While the far side of the moon is also covered with craters, there are no maria present.

More than 70 spacecraft have gone to the Moon and 12 astronauts have actually had the chance to walk on the surface of the Moon. Throughout the missions, 842 pounds of lunar rock and soil have been brought back to Earth. A second dataset of the moon shows the locations of Apollo and Surveyor landing sites. The Surveyor landing sites are noted with an "S." There are also pictures taken from the Apollo 8, 11, 12, and 17 missions.

Notable Features

- Maria: Areas of lower altitude filled in with dark solidified lava
- Lunar Highland: Areas of higher altitude that appear lighter
- Abundance of craters
- Absence of Marias on far side of the Moon

Related Datasets



Details

Category **Astronomy**

Audio **No**

Dataset Source
Clementine Spacecraft

Dataset Developer Jens Meyer

Visualization Developer Steve Albers, NOAA/GSD

Contact Steve Albers

Directory FTP Link

Keywords Solar System, moon, landings





Mercury by USGS

Description



It's often hard to fully grasp just how big the planets in the solar system are, 1.3 million Earths could fit in the Sun, but that is hard to picture, A good way to help with this problem is drawing the planets to scale. This dataset has the Sun as the background and then has a picture of the solar system drawn to scale. The Sun is also to scale with the rest of the planets. By far, Jupiter is the largest planet with Saturn the second largest, but they are certainly no where close to being as big as the Sun, which has a radius of 432,000 miles (695,000 km). Now that Pluto is no longer classified as a planet, Mercury, the closest planet to the Sun, is the smallest planet with a radius of 1516 miles (2440 km). The second planet in the solar system, Venus, is the third smallest planet with a radius of 3761 miles (6052 km). Earth, of course, is the third closest planet to the Sun and the fourth smallest with a radius of 3963 miles (6378 km). Just past Earth is Mars, the fourth planet in the solar system. Mars is the second smallest planet with a radius of 2111 miles (3397 km). The first four planets are called terrestrial planets because they are made mainly of rock and have thin wispy atmospheres.

The outer planets are called gas giants because they are large and consist mainly of hydrogen and helium. The gas giants also typically have a large number of moons, while the terrestrial planets have limited moons. The first gas giant, Jupiter, is certainly a giant. The radius of Jupiter is 44,423 miles (71492 km). More than 1300 Earth's could fit inside Jupiter. The next planet past Jupiter is Saturn, the second largest planet. The radius of Saturn is 37,449 miles (60268 km). The rings of Saturn would be the width of a credit card and would extend much further than the picture shows. The edge of the brightest rings extends 75,900 miles (122,200 km) from Saturn and the faintest rings extend out 300,000 miles (483,000 km) from Saturn. The seventh planet from the sun is Uranus ranks as the third largest planet with a radius of 15882 miles (25,559 km). Now considered the eighth and final planet in the solar system is Neptune, the fourth largest planet with a radius of 15,389 miles (24,766 km). Uranus and Neptune are very close in size. The final object in the picture is Pluto, which is now classified as a dwarf planet. Pluto only has a radius of 715 miles (1150 km). It was demoted from planet to dwarf planet in 2006 when new guidelines were created to classify planets and Pluto didn't meet all of the qualifications.

Notable Features

- Caloris Basin: 800 miles in diameter (one of largest features)
 - thought to be created by impact early in history of planet

Related Datasets





Details

Category **Astronomy**

Audio **No**

Dataset Source MESSENGER, Mariner 10

Dataset Developer USGS

Visualization Developer **USGS**

Contact **USGS**

Directory FTP Link

Keywords
Astronomy, solar system, planet





Red Mars (25 degree tilt)

Description



Mars is aptly referred to as the red planet as its surface is red due to a high concentration of iron oxides in the soil. Often the center of science fiction stories, Mars once was believed to support intelligent creatures. Missions to Mars in 1965 and again in 1976 proved that there were no living organisms on Mars. However, this small rocky planet, the fourth from the sun, does have polar ice caps that change in size with the seasons. It is believed that 3.5 billion years ago the most significant floods in the solar system took place on Mars. The Mars Odyssey found large amounts of ice about 1 meter below the surface of Mars in 2002. This ice, thought to be from the floods, would fill Lake Michigan over two times. This is still not enough water to explain the erosion visible on Mars.

Mars touts not only the highest point in the solar system, but also a canyon over 4 miles (6.5 km) deep. The highest point, the mountain Olympus Mons is 88,500 feet (almost 17 miles) above the surrounding area and has an astounding diameter of over 300 miles. The base of the mountain is surrounded by a cliff that drops 20,000 feet (almost 4 miles). Compared

to Mount Everest, the tallest point on Earth at 29,035 feet, Olympus Mons is over three times taller. Another spectacle on Earth is $the Grand \ Canyon \ which is 277 \ miles \ long \ and \ 6000 \ feet \ deep \ at its \ deepest \ point. \ On \ Mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ is \ almost \ 2500 \ mars, \ Valles \ Marineris \ 1500 \ mars, \ Marin$ miles long, approximately the width of the United States, and nearly 4 miles (6.5 km) deep. In addition to the surface of Mars dataset, there is a dataset that includes images of the rovers that landed on Mars and the pictures that they took. Another dataset for Mars shows the crustal magnetic fields of Mars as measured by the Mars Global Surveyor. This is an important map because it proves that one point Mars had plate tectonics. Red is used for positive magnetic fields and blue is negative fields.

Notable Features

- Olympus Mons: highest point in the solar system at 88,500ft
- Valles Marineris: Canyon 2500 miles long and 4 miles deep
- Hellas Planitia: an impact crater in the Southern Hemisphere 4.3 miles deep and 1400 miles in diameter
- Presence of ice caps

Related Datasets



with Pictures



Details

Category Astronomy

Audio No

Dataset Source NASA explorations mission

Dataset Developer NASA

Visualization Developer David Himes, NOAA/GSD

Contact David Himes, NOAA/GSD

Directory **FTP Link**

KML KML File

Keywords Solar System, planet, red, magnetic map





Mars Landing Sites with Pictures

Description



Media Preview

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to Mount Everest, the tallest point on Earth at 29,035 feet, Olympus Mons is over three times taller. Another spectacle on Earth is the Grand Canyon which is 277 miles long and 6000 feet deep at its deepest point. On Mars, Valles Marineris is almost 2500 miles long, approximately the width of the United States, and nearly 4 miles (6.5 km) deep. In addition to the surface of Mars dataset, there is a dataset that includes images of the rovers that landed on Mars and the pictures that they took. Another dataset for Mars shows the **crustal magnetic fields of Mars** as measured by the Mars Global Surveyor. This is an important map because it proves that one point Mars had plate tectonics. Red is used for positive magnetic fields and blue is negative fields.

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Related Datasets





Details

Category **Astronomy**

Audio **No**

Dataset Source NASA Goddard Space Flight Center

Dataset Developer
NASA Goddard Space Flight
Center

Visualization Developer
NASA Goddard Space Flight
Center

Contact NASA Goddard Space Flight Center

Directory FTP Link

Keywords Solar System, planet, red, magnetic map





Venus Topography

Description



Most of Venus appears to be covered with gently rolling plains. Two areas rise up above the rest of the surface and are referred to as "continents." The first, Ishtar Terra is located in the Northern Hemisphere and is about the size of Australia. The highest point on Venus, the mountain Maxwell Montes is located on Ishtar Terra. The second continent, Aphrodite Terra, is located along the equator and is about the size of South America. There are no small craters in the surface for the apparent reason that the thick surrounding atmosphere disintegrates the meteors as they travel through the atmosphere. Where there are craters on Venus, they are usually bunched together indicating that a large meteor broke up as it traveled through the atmosphere and headed for Venus's surface.

The surface of Venus in geological terms is relatively young, dating about 300 to 500 million years old. Roughly 90% of the surface appears to be solidified basalt lava. More than 1000 volcanoes, with diameters in excess of 12 miles, cover the surface of Venus. There are two datasets that display information about the topography of Venus. The first is the

topographic map that uses color to represent height, with red for high elevations and blue for low elevations. The intensity of the color is proportional to the radar brightness. The second map is a shaded relief map, which is a topographic map that has been rendered so that it appears three-dimensional by creating shadows that would be cast if there was a light source. This map was created as if the light source comes from the east.

Notable Features

- Ishtar Terra in Northern Hemisphere (about size of Australia
 - o Maxwell Montes, highest poin on Venus
- Aphrodite Terra along the Equator (about size of South America)
- Lack of small craters and big craters in groups

Related Datasets



Details

Category Astronomy

Audio **No**

Dataset Source Magellan

Dataset Developer Calvin Hamilton

Visualization Developer Calvin Hamilton

Contact
Calvin Hamilton

Directory FTP Link

Keywords Astronomy, Solar System, planet, topography, shaded relief





Jupiter (movie)

Description



Media Preview

The fifth planet in the solar system, Jupiter is the first of the gas planets. It is the largest planet in the solar system with an impressive radius of 44,423 miles, more than 11 times that of Earth, and about one-tenth that of the sun. Because Jupiter is a gas planet, it does not have a solid surface, the gases simply become denser closer to the center, eventually turning into a liquid. Because this planet is not a solid, it easily distorts. In fact, Jupiter, which has the fastest rotation rate in the solar system, bulges at the equator and flattens at the poles due to its rapid rotation. Jupiter's composition is estimated to be 90% hydrogen and 10% helium with a couple of other trace gases as well. What can be seen from space are the ammonia clouds that surround the planet. The visible bands of color are the result of very high velocity winds that flow in opposite directions in adjacent bands. Within these bands are storms that have raged on for years. The most notable is the Great Red Spot, a storm that has been observed for 300 years. Three Earth's could easily fit into the Great Red Spot.

Jupiter has been described as its own little solar system because of the vast number of moons orbiting the planet. There are 63 moons around Jupiter, the most of any planet in the solar system. Four in particular, lo, Europa, Ganymede, and Callisto, are planet sized. In 2003 alone, 23 new moons were discovered. Reasons for this incredible number of moons include the strong gravitational force of the planet at 20.87 m/s2, more than double the gravitational force on Earth, and also the large magnetic field of the planet, which extends into Saturn's orbit. Like Saturn, Jupiter also has rings, though they are only visible when backlit by the sun and believed to be comprised of dust kicked up from meteor collisions with the four biggest moons.

Several new Jupiter datasets have come from both the Hubble Space Telescope and the New Horizons spacecraft. The New Horizons spacecraft was launched in January of 2006 with the goal of studying Pluto in 2015. On its way to Pluto, New Horizons has provided pictures of other planets as well. The black and white animation of Jupiter that is available for SOS is made of images from New Horizons spacecraft that have been overlaid on a Hubble Space Telescope image from 2007. The Hubble Space Telescope datasets include surface pictures from February and March of 2007 that show the Great Red Spot and the Red Spot Junior, a sequence of images that show the different layers of Jupiter's atmosphere by varying the spectrum, and a view of Jupiter after it was hit by a comet.

Notable Features

- Great Red Spot storm on surface observed for 300 years
 - o It moves East/West but never North/South
- Bands of color created by the high winds in opposite directions

Hubble Space Telescope and New Horizons Datasets

• The Red Spot Junior is visible

Related Datasets







Details

Category **Astronomy**

Audio **No**

Dataset Source Cassini

Dataset Developer Cassini Imaging Team

Visualization Developer Steve Albers NOAA/GSD

Contact

Directory FTP Link

Keywords Solar System, planet, biggest





Callisto (Jupiter moon)

Description



Callisto is often described as a simple solar body because of its simple composition and its level of inactivity at the surface. Callisto carries the title of being the oldest body in the solar system with a surface age of 4 billion years and also the most cratered. Callisto, the second largest moon of Jupiter, is the only body its size in the solar system that has had no resurfacing since its original impacts left their mark.

The largest craters on the surface of Callisto are surrounded by concentric rings which appear as cracks, but have smoothed out some with age. At nearly 1900 miles in diameter, Valhalla, the largest crater on Callisto, is a good example of a crater surrounded by concentric rings. The icy crust of Callisto has smoothed out some with age, the result being that there are no impressive mountains and the craters are not as deep as one might suspect. In fact, it is believed that the largest craters have been diminished by the flow of the ice across the surface over time.

Notable Features

- · Most cratered body in the solar system
- Craters with concentric rings around them
 - o Valhalla: the largest crater (diameter = 1900 miles) with rings
- Lack of mountains around the craters

Related Datasets

(None)

Details

Category **Astronomy**

Audio **No**

Dataset Source
Voyager and Galileo Image details

Dataset Developer **Bjorn Jonsson**

Visualization Developer Steve Albers, NOAA/GSD

Contact Steve Albers

Directory FTP Link

Keywords Solar System, moon





Io (Jupiter moon)

Description



lo has often been described as looking like a pizza covered with melted cheese, tomato sauce and olives. The reason for this distinct surface is its vast number of active volcanoes. There are hundreds of volcanoes scattered over the surface of the moon, which is a bit larger than Earth's Moon. Many of the volcanoes are still active and Voyager 1 and 2 were able to capture pictures of erupting volcanoes with plumes as tall as 190 miles

The path of lo around Jupiter is highly elliptical causing the tidal forces exerted on the moon to be immense. The effect of this is that the solid body of the moon can bulge out to almost 330 feet. This movement makes the moon incredibly hot, keeping the subsurface crust in a liquid state. This liquid sub-layer is one of the reasons for the high volcanic activity. One result of the volcanic activity is that there are very few crater marks as new lava is constantly filling in any craters that are created. Because of this, lo has a very young surface. There are two datasets available for lo. The first shows the surface of the moon. The second starts with the surface

of lo, then highlights the locations of 26 major volcanoes on lo and finally shows the surface again.

Notable Features

lo

- Extraordinary number of volcanoes
- Lack of craters
- "Pizza—like" appearance

Io Volcanoes

Volcanoes labeled with letters

Related Datasets



Details

Category **Astronomy**

Audio **No**

Dataset Source Voyager and Galileo

Dataset Developer Planetary Image Research Laboratory Laika's Celestia Add-Ons

Visualization Developer Steve Albers, NOAA/GSD

Contact Steve Albers

Directory FTP Link

Keywords Solar System, moon, volcano





Saturn without Rings

Description



Saturn was the only known ringed planet until 1977 when faint rings were detected around Uranus. Saturn is probably best known for its spectacular rings, but Saturn has many other unique features. Saturn is actually not a spherical planet. Most of the gas planets, in fact, flatten slightly and become oblate due to their rapid rotation. This characteristic is most pronounced on Saturn, where the equatorial diameter can be as much as 10% longer than its polar diameter. This variability in Saturn's diameter is due to its gassy composition of 75% hydrogen, 25% helium with traces of water, methane, ammonia, and rock. Saturn has a small rocky core, then a layer of liquid metallic hydrogen and a layer of molecular hydrogen.

Like Jupiter and the other gas planets, Saturn has a banded appearance in its coloration due to high winds in the atmosphere. The bands are not as distinct as those on Jupiter, however, they are very wide at the equator and easy to detect. Another similarity to Jupiter is the storms that are visible on Saturn's surface in the form of white or red ovals. However, none of these storms seem to be as long-lived as the Great Red Spot on

Jupiter. The two datasets for Saturn are the same with slightly different coloring.

Notable Features

- Banded appearance due to fast moving winds
- Wide bands at the equator
- Storms that appear as ovals in the bands

Related Datasets



Details

Category Astronomy

Audio

Dataset Source
NASA Goddard Space Flight
Center

Dataset Developer NASA Goddard Space Flight Center

Visualization Developer
NASA Goddard Space Flight
Center

Contact
NASA Goddard Space Flight
Center

Directory FTP Link

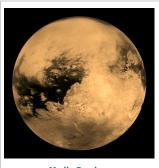
Keywords Astronomy, solar system, planet, gas planet





Titan (Saturn moon) color

Description



Media Preview

Long ago Titan was thought to be the largest moon in the solar system. New observations have revealed that Ganymede, one of Jupiter's moons is even larger. Part of the reason for the mix-up is the thick, dense atmosphere that surrounds Titan, obstructing surface views. Titan, like Ganymede, is larger than both Mercury and Pluto. Until recently, a clear view of the surface was not available. In late 2004 the Cassini orbiter began to study Titan, and in January of 2005, the Huygens probe actually landed on the surface and began transmitting photographs of the surface.

The atmosphere that encircles the moon is 50% greater than that around Earth. Composed of mainly nitrogen, similar to the Earth's atmosphere, the atmosphere of Titan also has 6% argon and some methane along with many other organic compounds. This combination of gases, combined with sunlight, has created thick smog, similar to that seen over large cities. There are also clouds of ethane and methane obstructing the view of the surface. From the Huygens probe there is still much to discover, but some initial results show "lakes" and "rivers" that are currently dried up and are

mostly crater-free surfaces. At least one of the lakes has been verified to have liquid ethane in at the present time. In 2009 the Cassini orbiter captured sunlight reflecting off surface, confirming the presence of liquid on Titan in the area covered with many large, lake-shaped basins. While it is not currently raining on the surface, there is some evidence of precipitation and erosion on the surface. There are three Titan datasets, one in color, the second in black and white, and the third is a black and white map with RADAR swaths from Cassini overlaid. The RADAR swaths show some of the seas, lakes and rivers of liquid hydrocarbons near the North Pole.

Notable Features

- Relatively smooth surface with almost no craters
- Color variation across the planet (previously thought to be seas of methane, but that has been disproved. True origin has not been discovered.)
- At least one lake of liquid ethane is on the surface at the present time

Related Datasets



black and white



Titan with RADAI

Details

Category **Astronomy**

Audio **No**

Dataset Source Cassini

Dataset Developer Fridger Schrempp

Visualization Developer Steve Albers, NOAA/GSD

Contact Steve Albers

Directory FTP Link

Keywords Solar System, moon





Real-Time: Sun - STEREO - Gap Fill

Description



The Solar Terrestrial Relations Observatory, STEREO, which consists of two satellites, was launched in October 2006. The two satellites are on a path similar to Earth's orbit, with one satellite ahead of Earth and one satellite behind Earth in orbit. The satellites, named STEREO Ahead and STEREO Behind, are slowly drifting further a part, keeping Earth between them. As they drift further from the Earth, they are able to provide a view of the sun that cannot be seen from Earth. For the first time, the sides and eventually the backside of the sun will be visible with the STEREO satellites. Each of the satellites is equipped with a suite of instruments for observing and studying the sun. This new view of the sun will allow scientists to observe the structure and evolution of solar storms like never before.

In this real-time dataset, imagery from STEREO Behind and STEREO Ahead are morphed together to provide near full coverage of the sun. The images for this dataset were taken with the EUVI telescope in the extreme ultraviolet wavelength. In order to keep all of the various wavelengths

straight, scientists color the different wavelengths. The 195A wavelength used here is arbitrarily colored green. In this wavelength, the brighter areas are hotter and the darker areas are cooler. The bright, active regions are where solar storms are likely to originate. In these areas, hot plasma from the sun is trapped in the sun's magnetic field. A solar flare is an explosion that occurs when the energy trapped in the magnetic field is suddenly released. Solar flares can cause Coronal Mass Ejections, CME, which are outflows of plasma from the sun that can cause geomagnetic storms on Earth. The dark areas that can be seen are called coronal holes, and are areas where the plasma is able to escape because the magnetic field is open. There are four different versions of this dataset. Two versions leave the backside of the sun that is not visible by satellite blank and the other two versions fill in the gap with persistence data showing the last available imagery. Within each of those versions, there is one dataset that shows the solar rotation relative to the Earth and another dataset that has the solar rotation frozen. The angle shown in the label is the angle between the satellites.

Notable Features

- The bright, active regions are where solar storms are likely to originate
- Two versions leave the backside of the sun that is not visible blank and the other two versions fill in the gap with old data
- The angle shown in the label is the angle between the satellites

Related Datasets



Details

Category **Astronomy**

Audio **No**

Dataset Source NASA STEREO

Dataset Developer Steve Albers, NOAA/GSD

Visualization Developer Steve Albers, NOAA/GSD

Contact Steve Albers

Directory FTP Link

Keywords Solar System, sun, stereo, realtime